REMARKS

Applicant is in receipt of the Office Action mailed November 19, 2003. Claims 1-4 and 56-59 were amended to address the cited errors in the Office Action. Withdrawn claims 60-77 were amended to simplify the preamble in preparation for a possible rejoinder. Withdrawn claim 36 was also amended to correct an antecedent basis error in preparation for a possible rejoinder. Applicant thanks the Examiner for consideration of the allowable matter (claims 5 and 59), but believes that the pending claims are allowable as currently amended. Further consideration of the present case is earnestly requested in light of the following remarks.

Restriction Requirement

Regarding the Restriction Requirement, Applicant has submitted a Petition under 37 CFR 1.144 concurrently with this Response.

Information Disclosure Statement

The Office Action indicated that the listing of references in the specification on page 27 was not a proper information disclosure statement. Although the listed references were incorporated by reference for background information, Applicant is submitting these references concurrently in an IDS.

Objections

Claims 1-5, 26-30, 56-59, and 68 were objected to under 37 C.F.R. 1.75(a).

Regarding claim 1, the Office Action noted that there was no mention of executing the program instructions stored in the memory medium. Applicant has amended claims 1 and 2 to particularly point out that the stored program instructions are executable by a processor to implement the described functionality presented in the claims.

Claims 2, 3, 57, and 59 were amended to address the antecedent basis errors noted in the Office Action. Claim 59 was further amended to correct a "cut and paste" error in the preamble.

Claim 4 was amended to address the cited ambiguity regarding "said analyzing".

Regarding the preamble of claim 56, the Examiner indicated that there was some ambiguity as to the definition of a "measurement system". Applicant has amended claims 56-58 and 60-77 to simplify the preambles by replacing the term "measurement system," with the term "system".

Regarding claim 68, the Examiner noted the further inclusion of the one or more measurement devices in the measurement system which were previously introduced in claim 56. Applicant submits that while configuration of one or more measurement devices was introduced as a capability of the measurement system in claim 56, the one or more measurement devices were not themselves included in the measurement system proper, this inclusion being addressed in claim 68. Applicant respectfully submits that claim 68 is proper as written.

Section 103 Rejections

The Office Action rejected claims 1-4 and 27-29 under 35 U.S.C. 103(a) as being unpatentable over Lewis et al. (5,812,394, "Lewis") in view of "Bridging the gap between specification and implementation" (Dietterich). Applicant respectfully disagrees.

As the Examiner is certainly aware, to establish a prima facie obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974), MPEP 2143.03. Obviousness cannot be established by combining or modifying the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion or incentive to do so. In re Bond, 910 F. 2d 81, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990).

Additionally, as held by the U.S. Court of Appeals for the Federal Circuit in Ecolochem Inc. v. Southern California Edison Co., an obviousness claim that lacks evidence of a suggestion or motivation for one of skill in the art to combine prior art references to produce the claimed invention is defective as hindsight analysis. The showing of a suggestion, teaching, or motivation to combine prior teachings "must be clear and particular . . .. Broad conclusory statements regarding the teaching of multiple

references, standing alone, are not 'evidence'." *In re Dembiczak*, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999). The art must fairly teach or suggest to one to make the specific combination as claimed. That one achieves an improved result by making such a combination is no more than hindsight without an initial suggestion to make the combination.

Applicant submits that none of the cited art presents or suggests a motivation to combine, and that the Examiner has simply attempted to construct the features and limitations of Applicant's invention as claimed by joining individual features described in the cited references with no motivation to combine provided other than the Examiner's observation that an improved system would result, which is clearly hindsight analysis. Applicant further submits that even if the references cited were to be combined, the combination would not produce Applicant's invention as claimed.

Amended claim 1 recites:

1. (Currently amended) A memory medium comprising program instructions for creating a measurement run-time, wherein the program instructions are executable by a processor to implement:

a measurement task specifier, operable to generate a measurement task specification for a measurement task in response to user input;

an expert system, operable to analyze the generated measurement task specification and generate a run-time specification for the measurement task;

wherein the run-time specification is useable to:

configure one or more measurement devices according to the run-time specification; and

generate a run-time, wherein said run-time is executable to perform the measurement task.

The Office Action asserts that Lewis discloses "a measurement task specifier, operable to generate a measurement task specification for a measurement task in response to user input", citing the Abstract, Figures 2, 8, 13, 18a, col. 28, lines 31-46, col. 107,

lines 57-67, and col. 108, lines 22-51, and further asserts that Lewis discloses a run-time specification that is useable to "configure one or more measurement devices according to the run-time specification", and to "generate a run-time, wherein said run-time is executable to perform the measurement task", citing the Abstract, Figures 18a, 22, 25a, 25b, col. 87, lines 20-23, 54-57, col. 88, lines 48-50; and the Abstract, Figures 18a, 22, 25a, 25b, 70, col. 3, lines 20-31, col. 90, lines 55-62, and col. 104, lines 43-53, respectively. Applicant respectfully disagrees.

As stated in the Abstract, Lewis teaches "an object-oriented development system for developing control schemes for facilities". More specifically, as described in the specification and claims, Lewis discloses a development system whereby a user uses graphical techniques, e.g., device diagrams, to create a physical description of a facility and a logical definition of a control scheme for the facility. The user selects device symbols representative of equipment or control functions, and graphically interrelates the device symbols with corresponding device objects to create the device diagrams. The user then specifies logical instructions for the device objects, thereby specifying the behavior of the equipment and control functions.

The various figures and passages cited in the Office Action illustrate and describe a graphical user interface for graphically developing a control system for a facility and various diagrams illustrating its manner of use. Nowhere does Lewis teach or suggest a measurement task specifier *generating a measurement task specification for a measurement task in response to user input.* In fact, the only type of specification even mentioned in Lewis relates to *user-defined device symbols* that allow for *specification of a symbol* which can connote either physical or logical representations. Thus, Lewis does not teach or suggest a task specification or a run-time specification, and specifically does not teach or suggest generating a run-time specification from a task specification.

Applicant further submits that Lewis neither teaches nor suggests a run-time specification that is "useable to configure one or more measurement devices according to the run-time specification", and to "generate a run-time, wherein said run-time is executable to perform the measurement task". Rather, Lewis discloses a graphical development system that facilitates design and development by the user of a facility control program that combines a physical description of the facility with logical control

of devices in the facility, via a device diagram and device symbols. Nowhere does Lewis teach, suggest, or even mention a run-time specification generated based on a task specification.

The Office Action admits that Lewis does not disclose the use of an expert system for analyzing a task specification and generating a run-time specification, but asserts that Dietterich does teach this use of an expert system, citing pages 80 and 81 of Dietterich. Applicant respectfully disagrees.

Applicant notes that Dietterich describes two general approaches: one in which specifications are converted into a form that the runtime architecture can interpret directly, and another in which a runtime architecture interprets a specification directly Both of these approaches are illustrated in Figure 1 (which includes Figure 1a, 1b, and 1c) of Dietterich. As illustrated and described clearly in Dietterich, neither of the described and illustrated approaches teaches or suggests Applicant's invention as represented in claim 1. For example, regarding the approach illustrated in Figure 1b, Dietterich describes a compiler transforming (compiling) the specification to generate a compiled specification, which is then interpreted directly. Regarding the approach illustrated in Figure 1c, Dietterich describes an agent constructing a specialized interpreter that can interpret the specification directly. Nowhere does does Dietterich teach or suggest generation of a task specification in response to user input, and generation of a run-time specification by an expert system via analysis of the task specification, where the run-time specification is useable to configure one or more measurement devices and generate a run-time which is executable to perform the measurement task.

Applicant notes that Dietterich states that "the great majority of expert systems make no separation between specification and runtime implementations" (page 80, col. 1, paragraph three), and further describes rule synthesis (presumably by an expert system) that maps "from the requirements directly to a proposed design" which is then "analyzed to determine which requirements are violated", after which "a set of patching rules is applied to map from violations to design changes" (page 80, col. 2). Dietterich also describes analyzing the domain to find observable proxy variables that can approximate unobservable quantities (page 81, col. 3), but Applicant notes that this analysis relates to

the problem of unexecutable specifications as described by Dietterich, and is not at all the same or even similar to the analysis performed by the expert system as described in the present application and represented in claim 1. Finally, on page 82, col. 1, Dietterich describes "specifying an expert system using deep knowledge and then compiling it to produce a runtime system", which is certainly a different use of expert systems than taught in the present application. In other words, in this approach (of Dietterich), the expert system is itself specified and compiled to produce the runtime system, while in Applicant's system, the expert system analyzes a task specification and generates a run-time specification based on the analysis, where the run-time specification is useable to configure measurement devices and generate an executable run-time. Applicant submits that Dietterich thus provides no motivation to combine to produce Applicant's system as represented in claim 1, and that even if the combination were made, the resulting combination would not read on Applicant's claim 1.

Thus, Applicant respectfully submits that claim 1, and claims dependent thereon, are patentably distinct over Lewis in view of Dietterich, and are thus allowable for at least the reasons provided above. Removal of the 103 rejection of claims 1-4 and 27-29 is respectfully requested.

Claims 56-58 and 68 were rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis in view of Dietterich, and further in view of Yen et al. (5,434,952, "Yen"). Applicant respectfully disagrees.

Applicant respectfully submits that none of the cited references provide or suggest a motivation to combine to produce Applicant's invention as represented in claims 56-58 and 68, and that even if the references were combined, the resulting combination would not read on these claims.

Amended claim 56 recites:

56. (Original) A system, comprising:

a measurement task specifier, operable to generate a measurement task specification for a measurement task in response to user input;

an expert system, operable to:

analyze the generated measurement task specification;

validate the generated measurement task specification; and

generate a run-time specification for the measurement task;

a run-time builder, operable to:

analyze the run-time specification;

configure one or more measurement devices according to the run-time specification; and

generate a run-time, wherein said run-time is executable to perform the measurement task.

As may be seen, claim 56 includes many of the limitations of claim 1, and, as argued above, Applicant respectfully submits that Lewis fails to teach or suggest a measurement task specifier, a measurement task specification or a run-time specification based on the measurement task specification. Applicant further submits that Lewis fails to teach or suggest a run-time builder which operates to "analyze the run-time specification, configure one or more measurement devices according to the run-time specification, and generate a run-time, wherein said run-time is executable to perform the measurement task." As also argued above, neither Lewis nor Dietterich, either singly or in combination, teaches Applicant's described use of an expert system.

The Office Action asserts that Yen teaches the limitation of an expert system operable to validate the generated measurement task specification. Applicant respectfully disagrees.

Applicant notes that Yen describes "specifying an expert system to assist in systematic verification and validation of the expert system (a different expert system) at intermediate stages of development." Applicant submits that an expert system validating an expert system is specifically not the same as an expert system validating a generated measurement task specification. Applicant thus respectfully submits that Yen fails to teach this limitation of claim 56. Applicant further submits that Yen fails to teach the expert system generating "a run-time specification for the measurement task".

Applicant thus respectfully submits that neither Lewis, Diettrich, nor Yen, either singly or in combination teaches or suggests all of the features and limitations of claim 56, and so Applicant respectfully submits that claim 56 is patentably distinct over Lewis, Diettrich, and Yen, and thus, claim 56, and claims dependent thereon, are allowable for at least the above reasons. Removal of the 103 rejection of claims 56-58 and 68 is respectfully requested.

Applicant also asserts that numerous ones of the dependent claims recited further distinctions over the cited art. However, since the independent claims have been shown to be patentably distinct, a further discussion of the dependent claims is not necessary at this time.

CONCLUSION

Applicant submits the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel PC Deposit Account No. 50-1505/5150-52901/JCH.

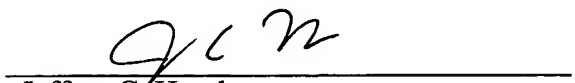
Also enclosed herewith are the following items:

☒ Return Receipt Postcard

☒ Petition Under 37 CFR 1.144

☒ Information Disclosure Statement

Respectfully submitted,



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